

NOAA Climate Science & Services

Monthly Climate Update

A look back at March and a preview for the next 3 months

Jake Crouch

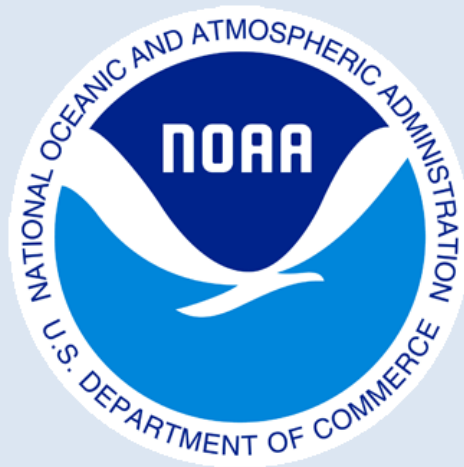
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State Climatologist/Associate Professor
South Dakota State University

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Monthly Forecaster,
NOAA's Climate Prediction Center

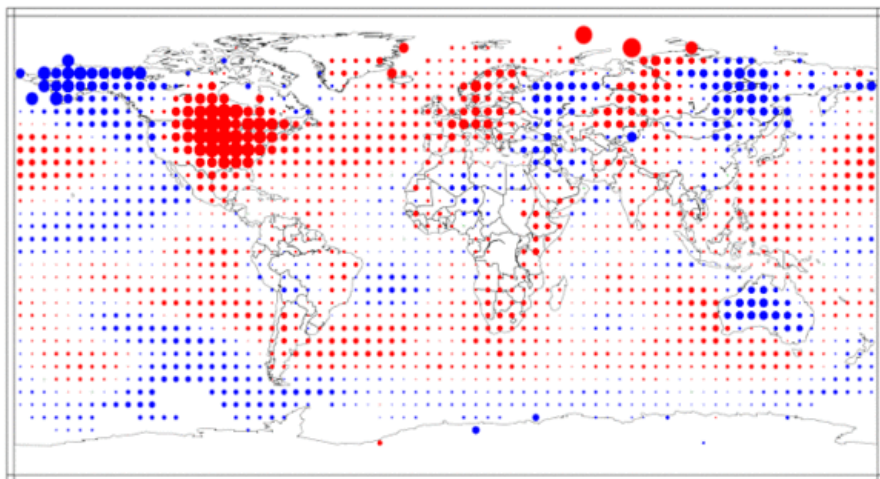


Global Climate Highlights

Temperature Anomalies March 2012

(with respect to a 1971-2000 base period)

National Climatic Data Center/NESDIS/NOAA



March 2012 Precipitation:

Dry: Europe, southeastern Asia, western Brazil, southern Africa

Wet: Australia, Japan, parts of the Middle East, Northern South America

Snow: North American snow cover was 4th smallest for March, while Eurasian snow cover was 9th largest

March 2012 Temperatures:

- 16th warmest March. Coolest since 1999.
- Global temperatures +0.46C / +0.83F above the 20th century average.
- La Niña continues to weaken.

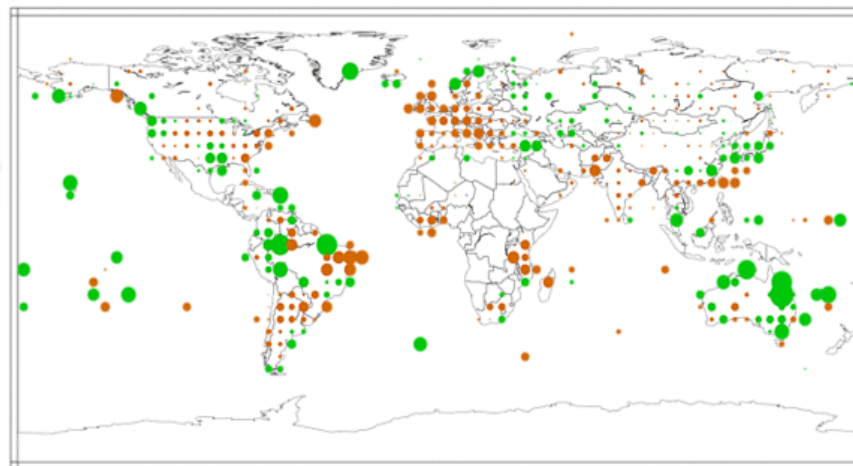
Regional Analysis:

- Contiguous U.S. and western Europe warmer than average.
- Australia, Alaska, and eastern Asia cooler than average.

Precipitation Anomalies March 2012

(with respect to a 1961-1990 base period)

National Climatic Data Center/NESDIS/NOAA



Millimeters

Global Climate Highlights

March Arctic Sea Ice

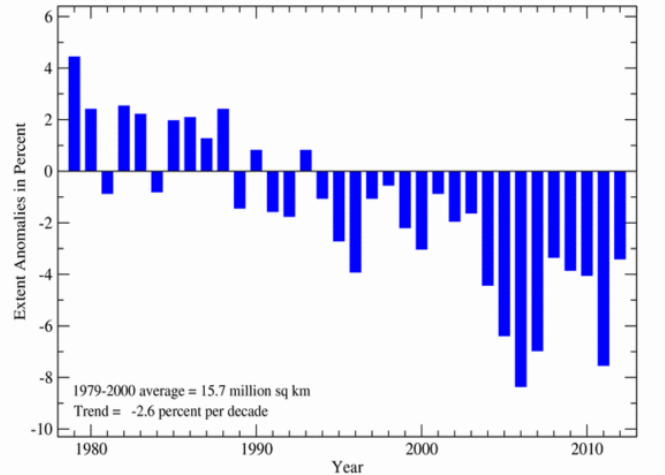
Sea Ice Extent
Mar 2012



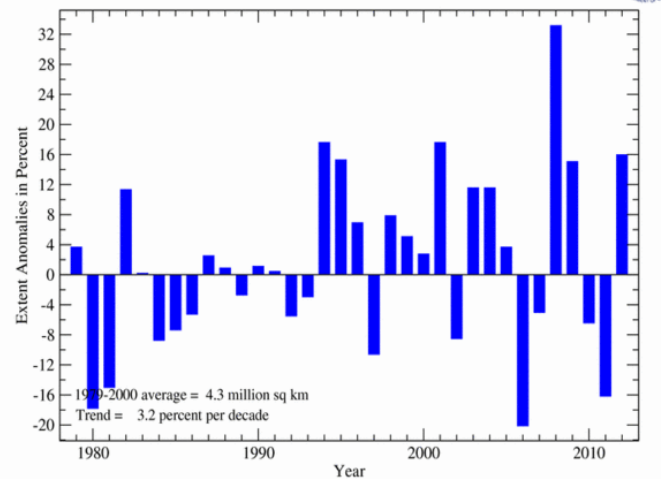
Total extent = 15.2 million sq km

National Snow and Ice Data Center, Boulder, CO

Northern Hemisphere Sea Ice Extent March Anomalies, 1979-2012



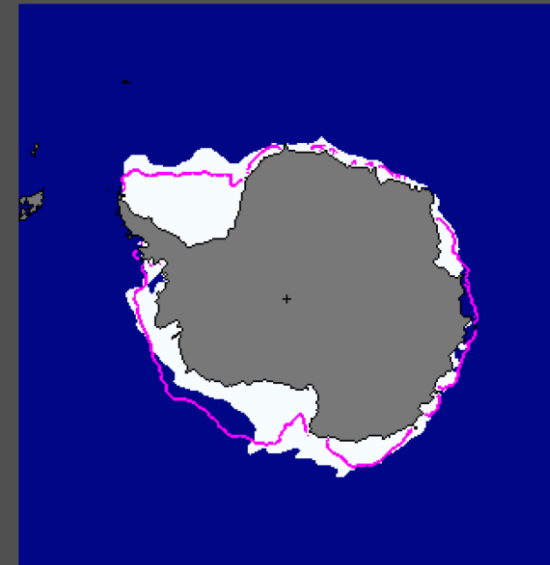
Southern Hemisphere Sea Ice Extent March Anomalies, 1979-2012



Data provided by the National Snow and Ice Data Center (NSIDC)

March Antarctic Sea Ice

Sea Ice Extent
Mar 2012



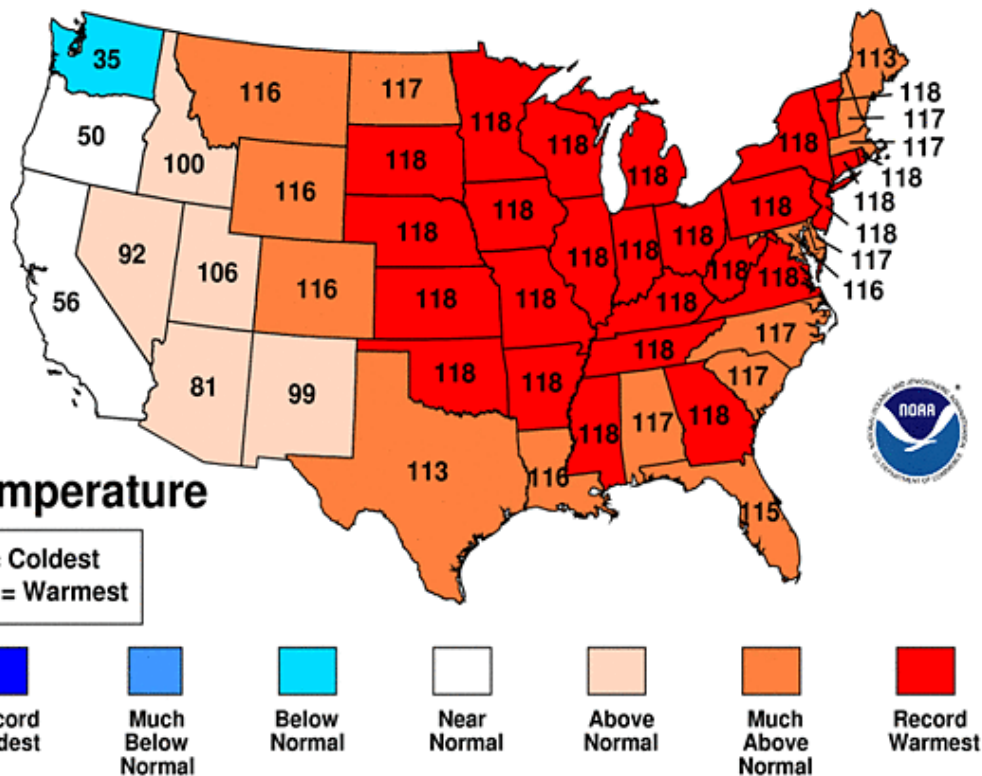
Total extent = 5.0 million sq km

National Snow and Ice Data Center, Boulder, CO

U.S. Climate Highlights – March

March 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



March 2012 Temperatures:

- Warmest March on record with an average temperature of 51.1 °F.
- Twenty five states record warm, and an additional 15 top ten warm.
- 15,000+ warm daily temperature records broken.
- Alaska had its tenth coolest March.

Contiguous United States

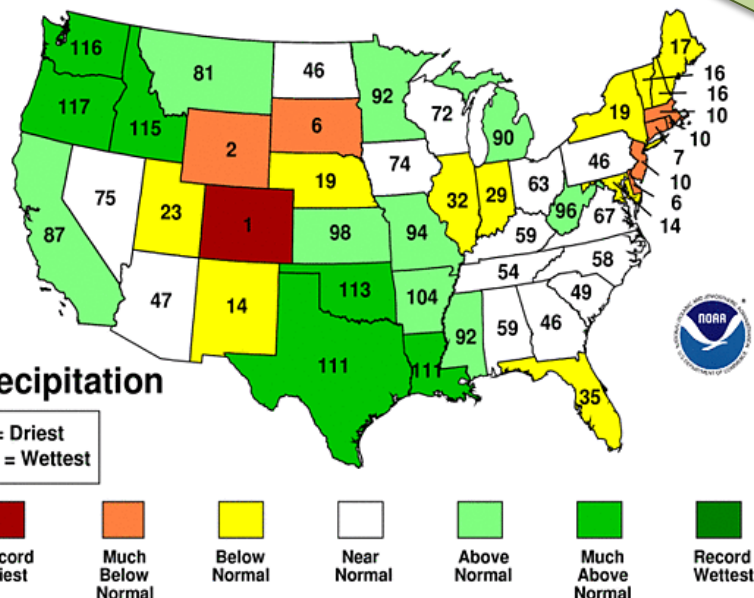
Warmest Months vs. Normal of 1,407 on record

1st	Jan 2006	+8.9°F
2nd	Mar 2012	+8.6°F
3rd	Mar 1910	+8.0°F
4th	Feb 1954	+7.6°F
5th	Jan 1990	+6.4°F
6th	Jan 1953	+6.4°F
7th	Feb 1930	+6.3°F
8th	Nov 1999	+6.0°F
9th	Feb 2000	+5.9°F
10th	Mar 2007	+5.9°F

U.S. Climate Highlights – March

March 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



Drought

- Drought expanded into the Northeast.
- Drought intensified across parts of the West and the Southeast.
- Some drought improvement in TX and OK.
- 37 percent of the contiguous U.S. in drought, and 59.5 percent abnormally dry.

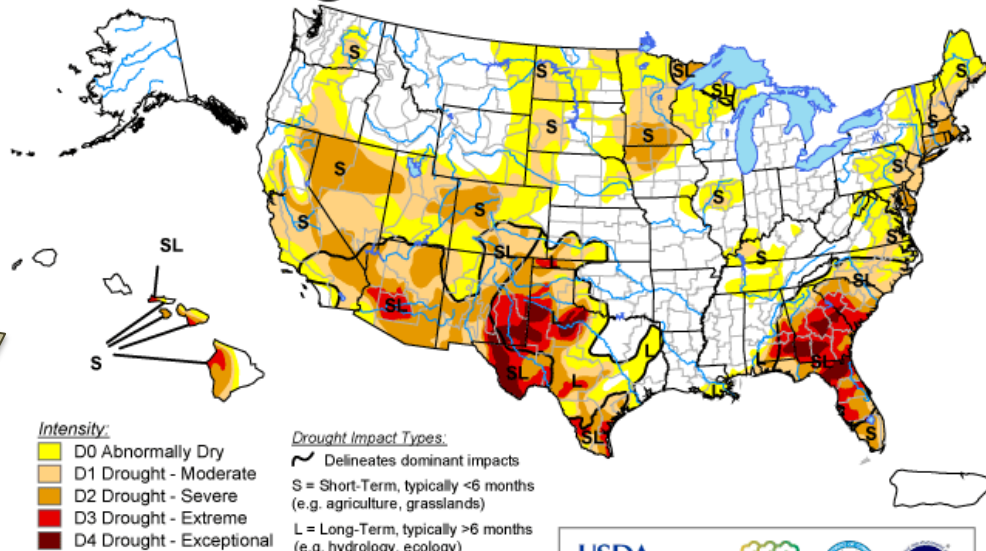
March 2012 Precipitation:

- Wetter than average across the Pacific Northwest and Southern Plains.
- Dry conditions in the Intermountain West and the Northeast. Colorado record dry.
- Nationally-averaged precipitation was 0.33 inch above average.

U.S. Drought Monitor

April 17, 2012

Valid 7 a.m. EDT



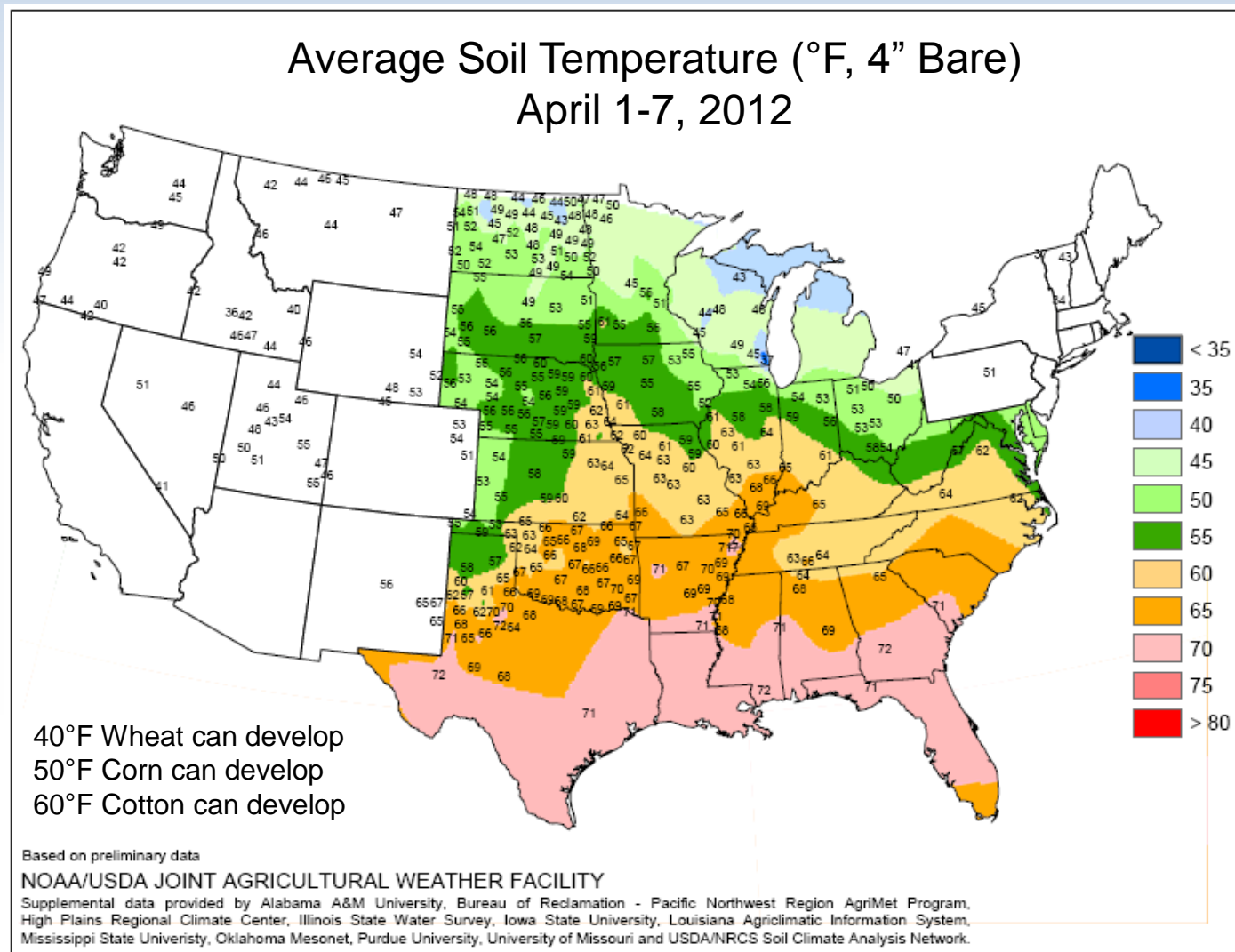
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, April 19, 2012
Author: Anthony Artusa, NOAA/NWS/NCEP/CPC

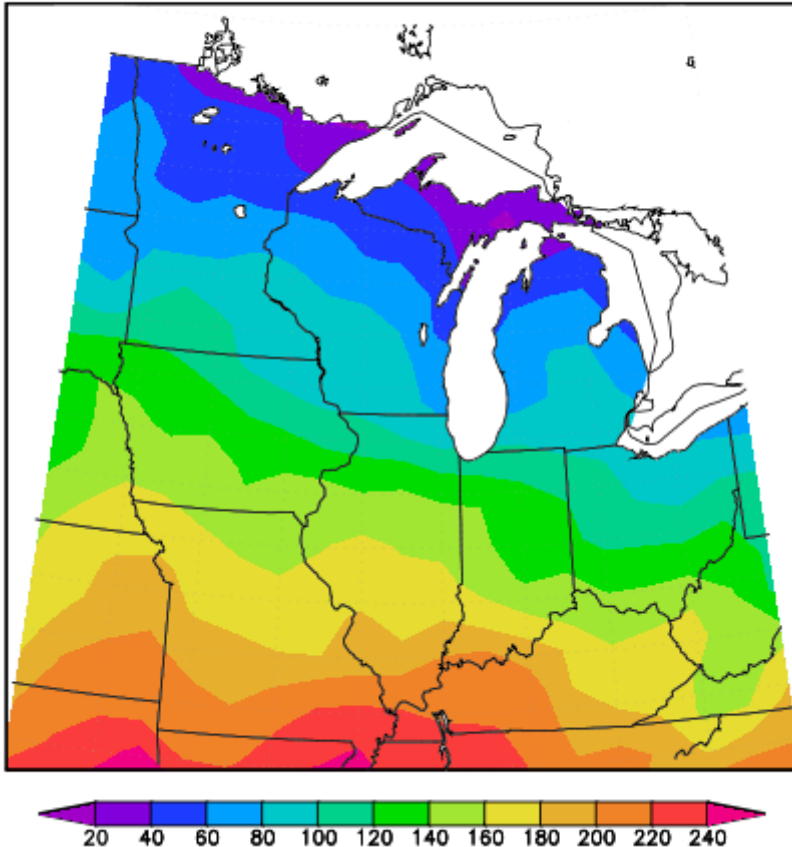
U.S. Soil Temperatures – early April



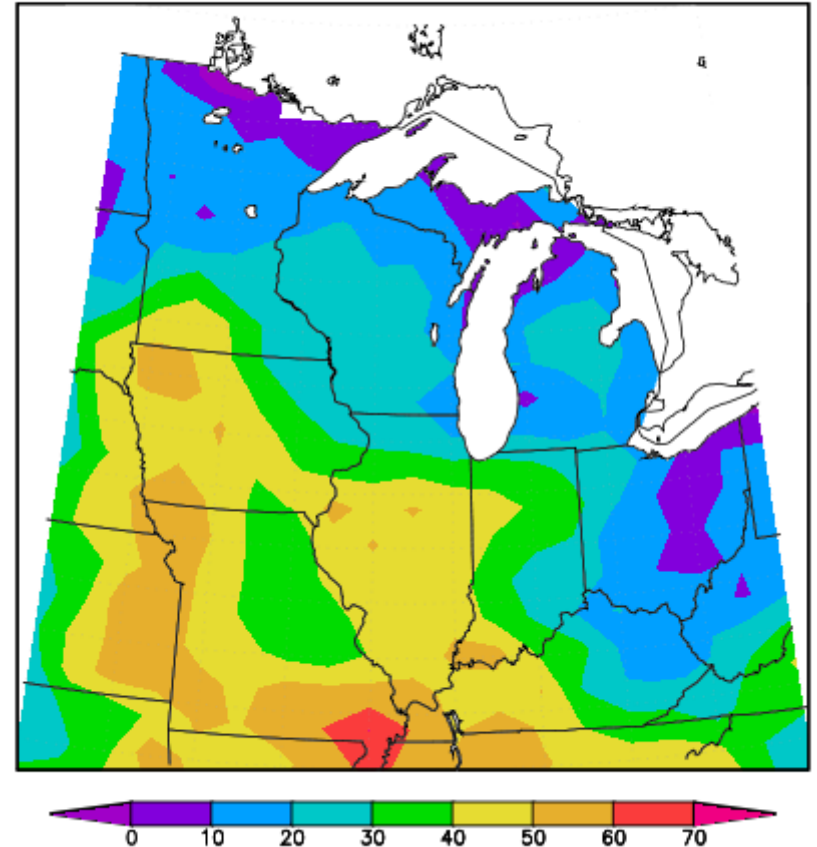
- Warm soils
- Encouraging planting
- 50°F corn develops

Midwest – growing degree day accum.

Total MGDD from 4/1/2012 to 4/17/2012



MGDD Departure, 4/1/2012 to 4/17/2012



Midwestern Regional Climate Center, Illinois State Water Survey
University of Illinois at Urbana-Champaign

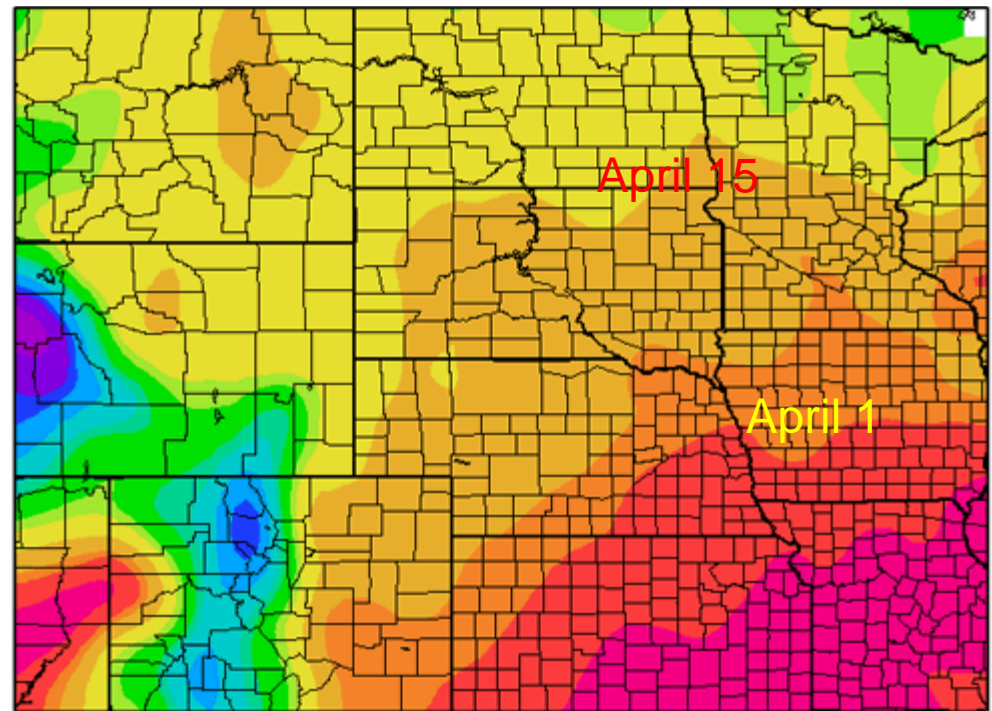
Warm temperature impact

- Current month GDDs ahead of average
- Most locations accumulated GDDs in March to put them a month ahead of average

Problem

- Plants are acting like early May in early April, far ahead of the average last freeze

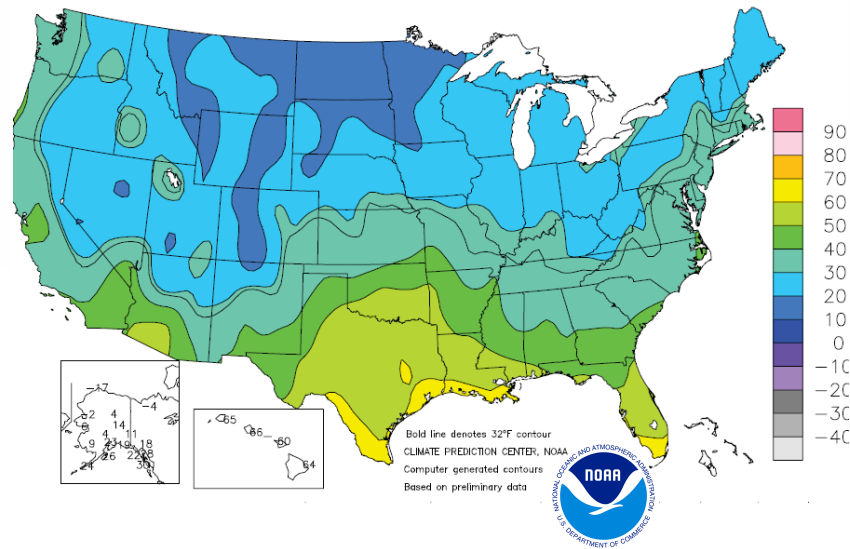
Julian Day of Last Spring Freeze at 32°F



Freeze impact

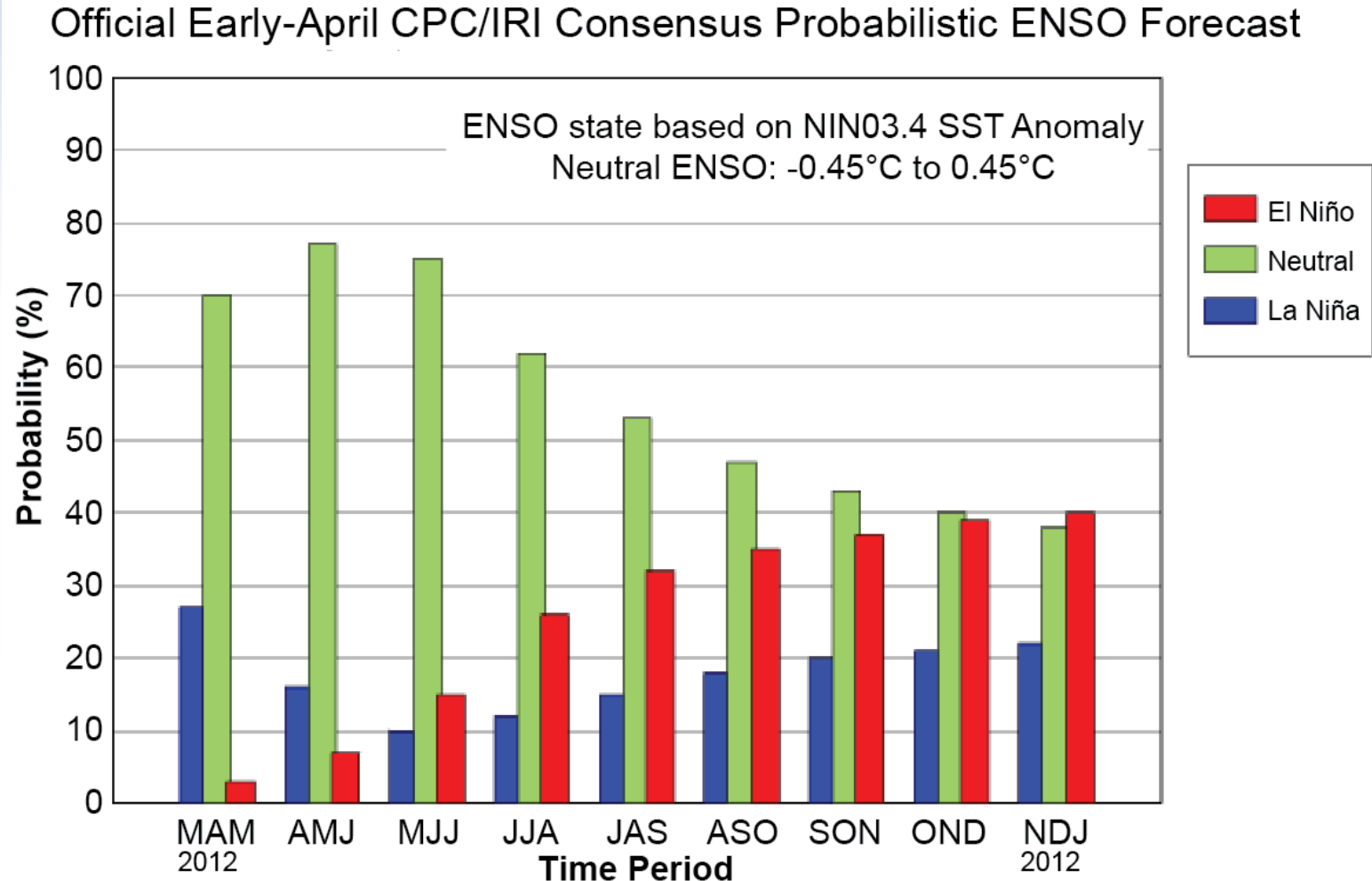
- Grape damage in southwest Michigan
- Other horticultural damage in Michigan
- Assessing winter wheat losses
- Some damage may not be known for a while
- Most row crops not planted, though some were

Extreme Minimum Temperature (°F)
APR 6 – 14, 2012

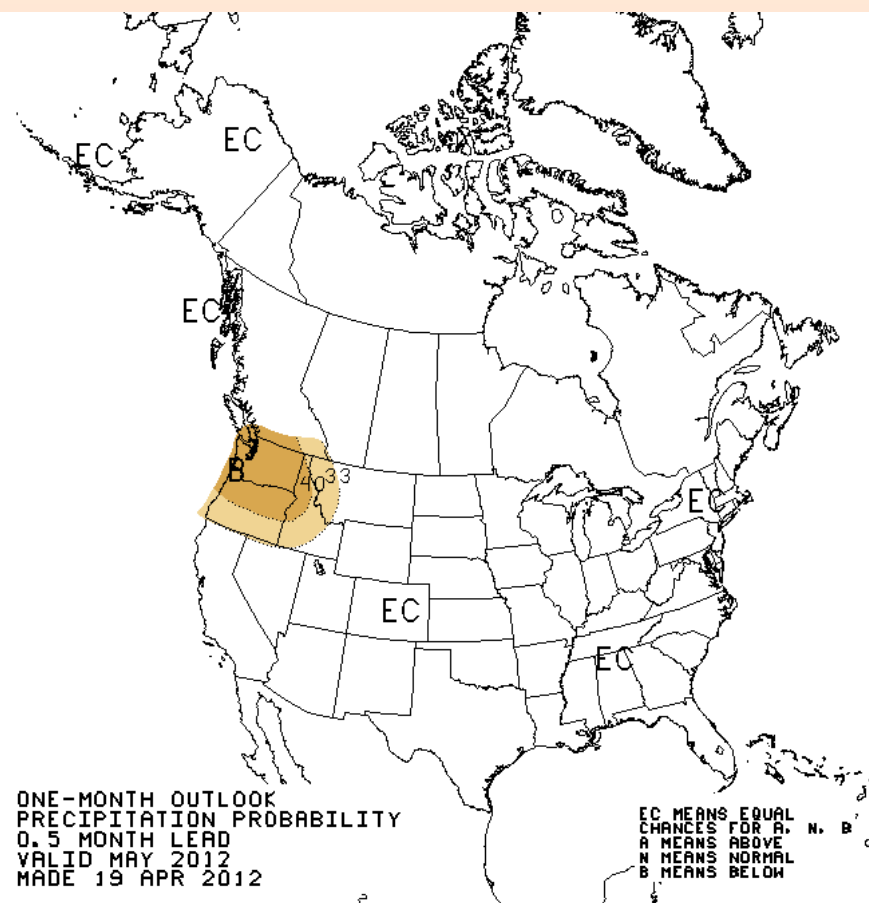
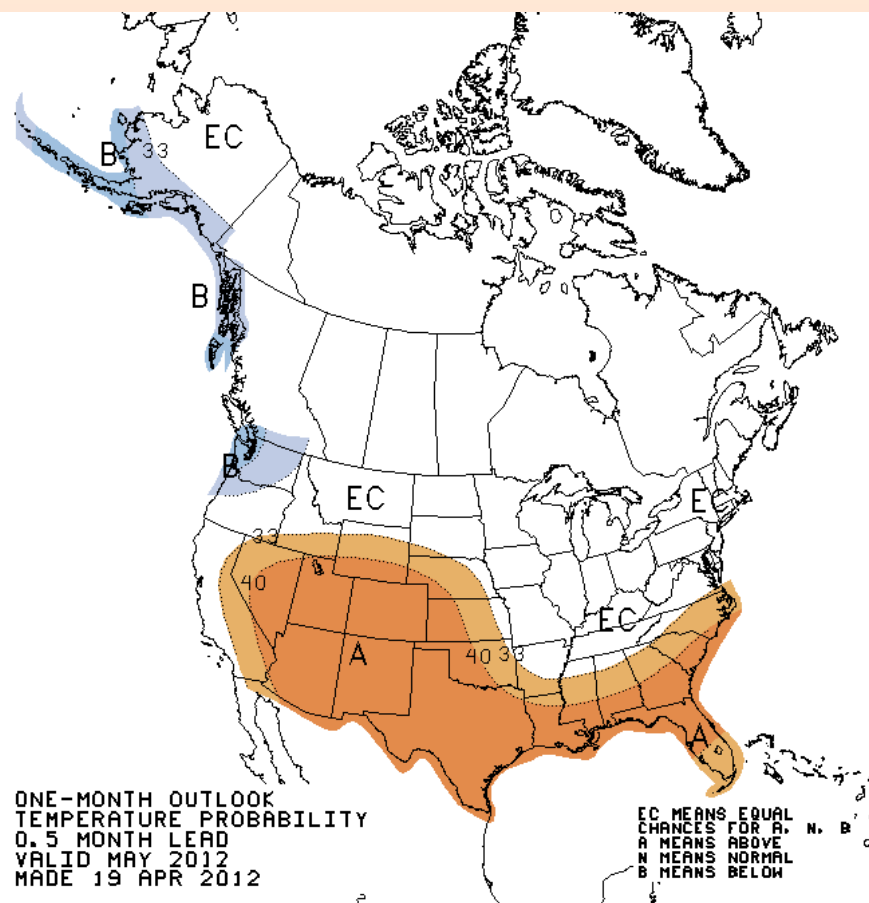


Current El Niño/Southern Oscillation (ENSO) Status

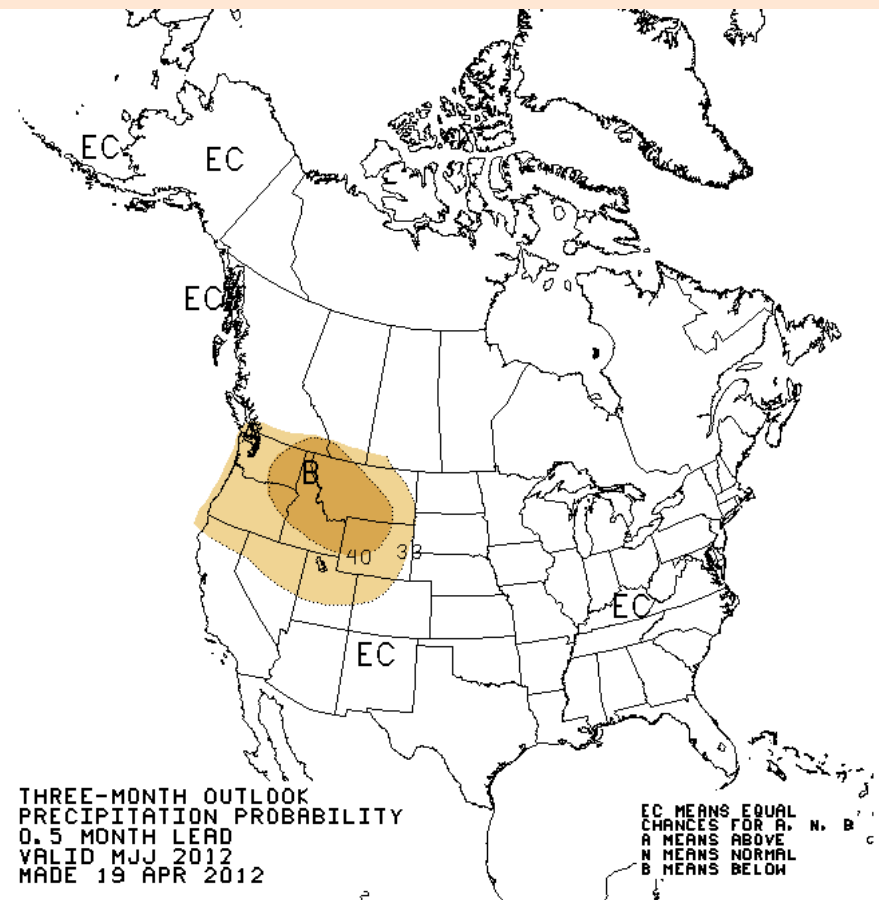
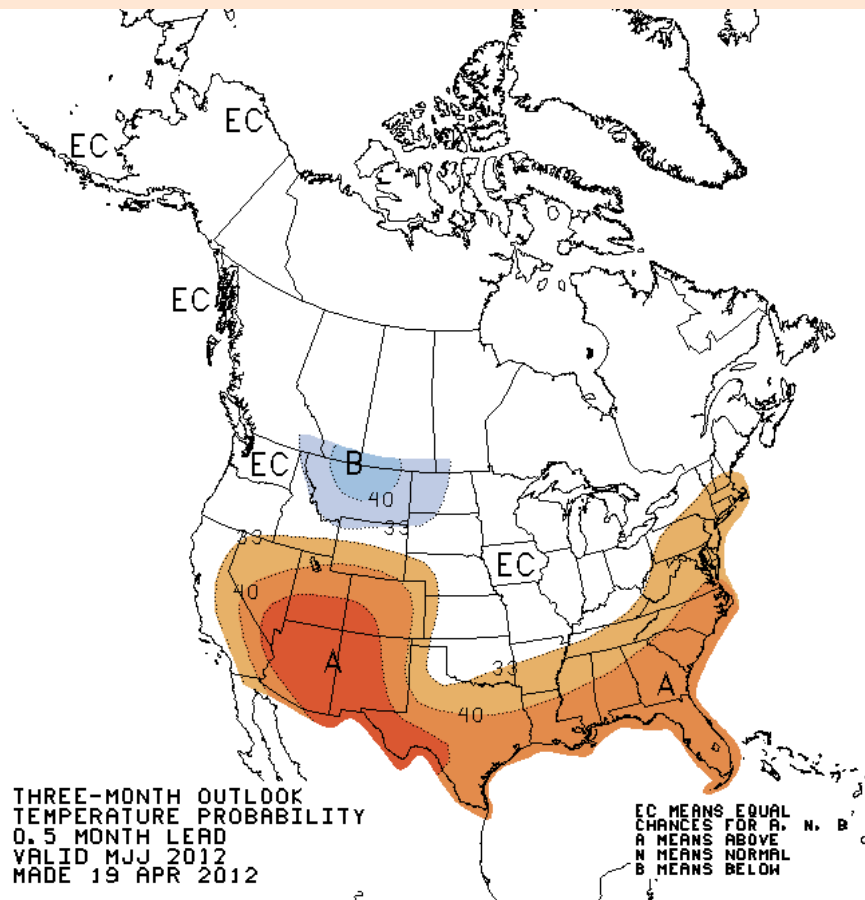
La Niña Has Weakened, Likely to End by May



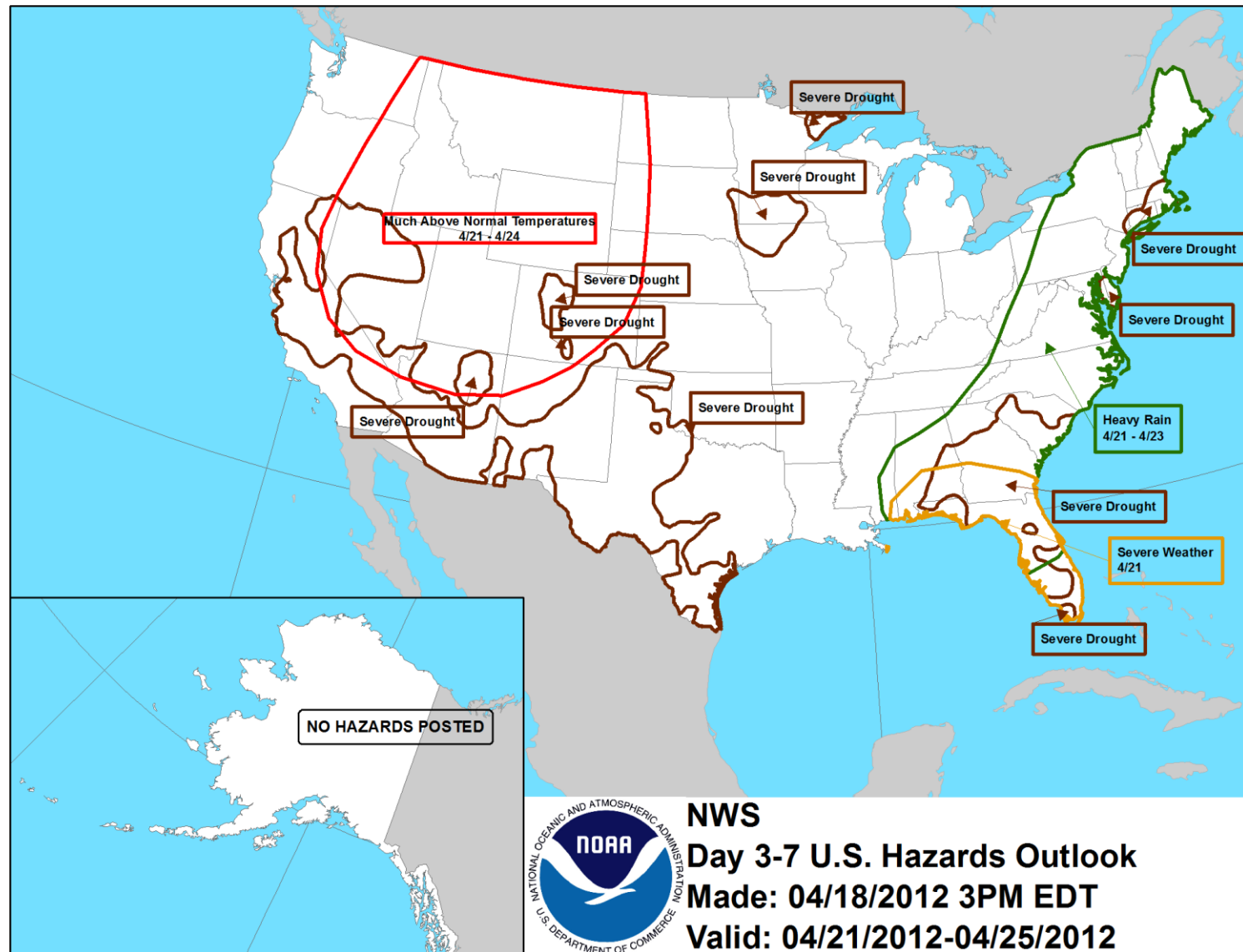
1-Month Temperature and Precipitation Outlooks



3-Month Temperature and Precipitation Outlooks



U.S. Hazards Outlook for Days 3-14



For More Information



- Today's Presentation: <http://www.ncdc.noaa.gov/sotc/briefings>
- NOAA's National Climatic Data Center: www.ncdc.noaa.gov
 - Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov
- Climate Portal: www.climate.gov
- U.S. Drought Monitor: www.drought.gov
- State Climatologists: <http://www.stateclimate.org>
- Regional Climate Centers: <http://www.hprcc.unl.edu/rccs.php>